THE LITTLE UNITY.

TENDER, ∴ TRUSTY ∴ AND ∴ TRUE.

VOL. II. CHICAGO, MARCH 16, 1882. No. 2.

OAK-BULLETS AND OAK-WOOL.

C. H. CLARKE.

I have just been reading such interesting accounts of the various galls which can be found upon oak trees even in winter, that I am almost ready to desert my favorite wood-box and plunge into the snow-drifts to examine the twigs and dead leaves on all the oaks in the neighborhood.

I will copy for you some of these descriptions, hoping that you will enjoy looking for specimens to illustrate them.

"Oak-Bullets" are among the commonest and most frequently noticed galls of any of those upon our oaks. They are smooth and globular, and about the size of a bullet, and grow either singly or in clusters upon twigs of the white oak. Galls similar in appearance have been found upon the post oak. An oval cell in the center of each bullet contains the little worm, which sometimes passes the winter in this retreat. The substance of the gall outside of this little egg-like cell is of a hard, corky texture. In the summer these bullets are very pretty to look at, being of a pale green color, shading into bright red on the side most exposed to the light, but when the leaves fade in autumn, they fade also to the same dull yellow hue.

The "Wool-Sower Gall" is a roundish mass resembling wool, which occurs on white oak twigs. In June these woolly masses are of a pure white color, tinged or speckled with rose-red. In July the little gall-wasps emerge from this wool. They are of a shining black color, with yellow legs, and they immediately begin to lay the eggs for a second crop of galls. These are of a dull yellow color, and a coarse texture, resembling sponge rather than wool, and they remain on the trees through the winter. Each contains in its interior a mass of hard grains, like seeds, in which are found the little grubs.

The "Oak-Wool Gall" is very similar in appearance to the kind just described, but it occurs on the leaf of the oak instead of on a twig. It grows upon one of the principal veins on the under side of the leaf, but the insects which come from it are quite different in appearance from those which come from the wool-sower gall. If you try to rear them, however, you will be less likely to obtain the real gall-maker, as it is more subject to the attacks of parasites than is the former species. In winter the little seed-like bodies of the former species furnish food for many birds.

A gall closely resembling the wool-sower gall of the white oak is found in the spring upon the black oak. It also contains little seed-like kernels, but the gall-wasps which come from them lay their eggs in the young fruit of the previous year's setting, between the little acorn and its cup. At this spot is produced a small pip-like body, half-embedded and half exposed. This falls with the acorn to the ground, where it lies all winter, and the next spring the gall-wasp which comes out lays its eggs upon the *twigs* of the tree, producing woolly galls.

BLACK ROSE LEAVES.

One fall I noticed that some rose leaves in the garden seemed covered with a black, sooty dirt. Some currant bushes growing near the roses were in the same grimy state. Upon examination I found that a black fungus was luxuriating upon the twigs and leaves of a pine tree overhead, and had shaken some of its cells or spores upon the plants beneath, where their growth had produced the sooty appearance. On the pine the fungus was bristling with black points, which were in reality little spore-cases, while on the leaves below it was merely a thin film of black, in which condition I have also found it on the leaves of a tulip tree, and on those of a linden. The same or a similar fungus is very injurious to orange, olive and lemon trees. It likes best to grow on leaves where aphides or plant-lice have been living. Different states of it have been called by different names, of which I think that of "fumago" most descriptive. A French book says, "It is this fungus which, mixed with dirt, so begrimes the statues in our public walks."

C. H. C.

SNOW-DROP MOSS.

This little moss grows in silvery-white patches on exposed grounds, paths, pavements, etc. Its scientific name is *Bryum Argenteum*, or the "Silver Bryum," but I call it "Snow-Drop Moss," partly because I first find it in fruit amid the melting snow in early spring, and partly because the tiny hanging capsules are very much the shape of the pendulous buds of the snow-drop. Their color, however, is usually dark red. They grow on short fruit-stalks which usually do not exceed a quarter of an inch in length.

C. H. C.

WHAT FOR, AND WHY.

KATE GANNETT WELLS.

I wonder if three of the remarks that children frequently make to other people do not sound like "What's the use?" "What for?" "Why?" We tell them to wash their hands, brush their hair, or go to bed, and they reply, "What for?" They always want to know the reason why; not that, after all, they care why, but because they have fallen into the habit of saying so, and the habit is a kind of dawdling, a putting off for a few moments the necessity of minding; a little inattention and disrespect to the person speaking.

Children of five and six years old say, "What for?" Boys and girls of twelve and fifteen say, "What's the use?" A boy is told to put on a clean collar; he calls out, "What's the use?" when he knows as well as you do; a girl is told to go to bed early, and she replies, "*Why* must I?" Both boys and girls are asked to be polite, and they say again, "What's the use in *that?*" They do not ask because they are ignorant, but because they are half-tired, half-cross, inattentive to reasons which they have heard given a dozen times, and so they display their crossness or fatigue by making objections. When they have grown up into older boys and girls, one can still hear them exclaiming, "What's the use in living, in being good, in doing anything which is hard?" Most of them, when grown, have to work, and do see the use in doing a great many things which they *must* do, but they still don't see the use in doing what they call unnecessary things for their own improvement. Sometimes, of course, they see the reason why when other people are concerned, and when the thing to be done can be of benefit to them.

Unless this spirit of asking why, just from laziness or a spirit of contradiction, is corrected when children are young, by and by they will ask, "What's the use in living?" and indulge in a kind of mild despair, in a lounging gait and a shuffling method of looking at life, instead of keeping their mind on their work or their lessons. Big boys and girls know what is meant by a shuffling method, and their little brothers and sisters imitate it.

For instance, a boy comes home from school, throws his overcoat on one chair, his books on another and himself on a sofa, stretching out his legs till one is frightened at their length. He looks pale, and if you did not know him of old, you would think he was going to be sick. At last he calls out, "Isn't dinner ever going to be ready? It is mighty mean to keep a fellow waiting when he can't get along at school, and it isn't his fault." The dinner is served, he shuffles into his chair, shuffles the food into his mouth, looking more and more wearied, at last throws himself back in his chair, dinner done, and declares nothing tasted good; that he wished he had not eaten any; that he had not got to study, nor to go out to play, nor to do anything, for everything is a nuisance, and *what's the use* in trying to do anything?

Children who are like this boy must learn to look at life in a wide-awake way; to be in downright earnest in all they do; to care a great deal to do the right thing in the right way. They must believe, when they are little, that other people know better than they do why they should be polite, attentive, brush their hair or black their boots. What *is* the fun in always objecting to everything? Is it fashionable, or pleasant, or does it seem like being grown up? Isn't there a difference between wanting to know "what for" for the sake of really understanding, and of asking "what for" because of an objecting mood?

"Few persons have any idea, as they walk in the country on a winter day, how the ground beneath their feet is teeming with life."

THE LITTLE UNITY.

40 Madison Street, Chicago.

One copy, per year, - - - - - -	50 cts.
To subscribers for Unity, or twelve to one address, each,	35 cts.
To Clubs or Sunday Schools, single or in quantity - -	25 cts.

Ellen T. Leonard, Editor.

Departments:	*Associate Editors:*
What to See. - -	Miss Cora H. Clarke, Jamaica Plains, Boston, Mass.
What to Do. - -	Mrs. K. G. Wells, 155 Boylston St., Boston, Mass.

Communications for the Editor to be sent to Hyde Park, Ill.; for the Departments, as above.

Entered at the Chicago Post Office as second-class matter.

TALKING TIMES.

What a litter! Whittlings, paper-cuttings, scraps of cloth and worsteds, are scattered everywhere. Has there been so much more work done than usual, or are there so many more workers to contribute to the general array?

"Frank, you are nearest the closet; bring out the brush and dust-pan, and when you have cleared up your place, pass them on to the next. We will soon be ready for our singing."

At this point the bright calico bag which Sally made always goes its round, gathering up the cuttings of cloth and paper from each worker, and is quickly followed by the brush and pan.

As a company, there is always readiness and good-cheer in this final clearing away of labor. Why is it so hard for a child alone and at home to willingly gather up and put away the scatterings that have been made by his work or play?

This is the way Jacob Abbott, who wrote the histories for young folks, and of whose wise and pleasant ways with children you may read in *Wide Awake*, answers his grandson's question, "*Must* I put all the things away, grandpapa?" "Oh, no; you can do just as you please about it." "But I am afraid I shall want to work on the lathe again to-morrow." "Yes, I suppose you will." "And I can't if I don't put everything in order. *Would* you fix them, grandpapa?" "Yes, I would if I were you; then you can finish your top to-morrow. But you may do just as you prefer, on the whole."

Do you see an answer in this to the question asked just before it, about its being so hard for children to learn to put away their work and litter at home? I am afraid somebody makes the mistake of being what is generally called "too kind," and putting your things away for you, and of then allowing you to have them again whenever you wish, without any effort on your own part.

We must not forget that the surest way to learn the lesson of conduct is to bear the consequences of our own act or neglect. When these are faithfully borne we soon learn to choose wisely. If we like to use tools, we must take the trouble to keep them in repair, or they will not serve us. When our friend lends us an interesting book, we are under obligation to use it with care and return in good order, or we will not be worthy of the favor again. It is easy for many to see obligations of this kind, but to quite overlook those of the home circle. If the work or the play is spread about the home sitting-room at a convenient time, then it becomes a debt to the family comfort to gather it up neatly and make room for the others when the convenient time is over. Otherwise one becomes a nuisance in monopolizing more of the home than is one's share. The faithful discharge of these continual obligations help to make us welcome in home and friendly circles. Without it we cannot expect to be so.

TELL US THE NEWS.

We have had no letters of late from any little companies of workers. Are they all too busy to let us hear? We take it as a sign of effective work being done, and ways being discovered, each for itself, that questions are quiet and results seldom compared. It is, however, very cheering to learn indirectly of the generous box containing work, provisions and money sent to the Foundlings' Home from "The Little Neighbors," of Downer's Grove; another, each, from "Busy Workers," of Geneseo, and "Buds of Promise," Clinton, Wis., besides money from "Careful Builders," of Western Springs. Four little girls, with whom we have had no correspondence, but who are owners of "Little Brown Jugs," have been putting them to better use than the traditional one had, by filling them with small contributions of money which they solicit regularly for benevolent purposes. They were found, last time, to contain thirty-six dollars. This is the only case on record, surely, where a jug has been made to yield, instead of consume, money. The only objectionable feature seems to be that the jugs must be broken to reach the cash, thus obliging other small ones to be supplied for the next soliciting trip.

We each one have our part and place. It is to stand on the right side of every question, and to do our duty every hour. It is to open our hearts * * * to accept the great gift of God, which is life now, and life forever. —*Dr. H. W. Thomas.*

Contentment consists not in persuading ourselves that our things are the very best in the world, but in believing they are the best for us, and giving God thanks for them.

Only a thought—but the work it wrought
Could never by tongue or pen be taught;
For it ran through a life like a thread of gold,
And the life bore fruit a hundred fold.

In the March number of WIDE AWAKE we find, besides the continued stories, many short ones which are especially good, such as "The Sixpence of a Princess," "The Sawing Match," and others, with some charming reminiscences of Miss Alcott's young days, under the title, "How I Entertained Two Little Girls." Poems upon "The Girl of the Period" and "Little Robin Adair" are among the best. In "The Story of Maple Sugar," the author tells us that the squirrel was the real discoverer of those sweets, and causes him to yield up his secret to a little Indian boy. Illustrations, a piece of music, the C. Y. T. R. U. Course of Reading, and the "Post Office" complete the number.

The well-known author Mrs. A. H. Leonowens has been sent to Russia by the *Youth's Companion*, and will soon contribute a striking series of articles on "Life in the Out-of-the-way Nooks and Corners of Russia."

"Unity" Sunday School Lessons—Series XII.

THE MORE WONDERFUL GENESIS;
OR,
CREATION UNCEASING.

BY H. M. SIMMONS.

LESSON X.

THE CREATION OF ANIMALS.

"THE FIFTH" AND "SIXTH" DAYS.

To the flooring and furnishing of the world-tent on "the third day" of the story, its lighting naturally followed on "the fourth," by the creation of sun, moon and stars. Being thus finished for use, its occupants are then created,—fish and fowl on "the fifth day," and the more important land animals, including man, on "the sixth." The "fourth day" coming first in the true order we have already noticed; the animals of the two following days we can treat together.

THE MAGNITUDE OF THIS CREATION.

Here, too, we see a far longer and larger creation. Away back in the Laurentian and Cambrian days, some of the lower animals had appeared and are preserved in fossils. Then during the later and long Silurian period,—whose rocks aggregate some four miles in thickness,—the various invertebrate types came. There we find radiates represented in beautiful corals and crinoids; molluscs, in shells of great variety and abundance; articulates, in the old trilobites. Late in this period the vertebrates also began to appear in low order of fishes, which spread and became the leading forms of the following Devonian times,—though our true boned fish did not come until long ages later. In the Coal period these Devonian fish were followed by amphibia, with lungs as well as gills, hence able to leave the water for land. During the Permian period these amphibia spread through many species now extinct; and in the Triassic were followed by reptiles, with lungs instead of gills, hence leaving the water altogether and becoming true land animals. During this latter period reptiles rose into flying forms, as in the pterodactyl, with forward feet expanded in wings; and wings are at length feathered, for better flight in birds. Relics of these primitive birds are found already feathered, but still retaining the old teeth and tails of reptiles. Finally in this Triassic period, which was fertile in creations, the first mammals came, with increased care for their young. Through the Jurassic and Chalk periods the mammals remained in the lower marsupial order, but in the Eocene, took the higher placental form. Through the Miocene and Pliocene periods these placental mammals multiplied into the variety of higher animals we have to-day, rising through nobler forms, until among them appeared the human body, noblest and most perfect of all.

So much more wondrous a creation than the old writer knew! Not finished in two days, but continued while rocks were laid, grain by grain, for many miles in thickness. Not a few species to be gathered in a garden or shut in an ark, but how many? Over 300,000 living species have already been described; and Mr. Lubbock in a late address estimates as many more yet undescribed, and that the extinct species would swell the number to above two millions!

THE METHOD.

And how created? Shaped by a visible God mechanically in occasional creations, as some think? Or shaped liked the plants, through divine law and life, in a constant and unceasing creation? The latter, most scientists say. For here we see the same progressive order and gradual growth as in all the other creative work. Through the rocks we trace the earlier and weaker forms gradually followed by the stronger vertebrates; among the vertebrates the lower life of the water gradually passing to the higher of the land,—gills at first supplemented, and then supplanted by lungs, which gradually enlarge, and in the better breathing bring higher warmth, force and life; the various organs gradually improving to correspond; fins becoming feet, and passing on one hand to wings for the air, and on the other to fingers for a higher life on the ground; nervous system gradually improving and concentrating in that noblest organ, the brain; and meanwhile the method of reproduction, which began with mere division, as in the lower plants, and which long remained by eggs abandoned like plant seeds to grow as they might, rose to the watched and warmed eggs of the bird, and the retained eggs of the mammal; and so that higher form of *attraction* between sexes, which had begun in plants, widened to include the offspring, and, in the higher animals reached parental care and family affection. So orderly and progressive has the creation been. And within this general relation special connecting forms are ever being found. The rocks in their broken bits of sentences from the earth's history seem to teach that the creation of animals, as of plants, has been one connected growth and evolution,—one specie branching into many as gradually and naturally as the acorn into the oak.

THE CREATION CONTINUED.

This conclusion is confirmed when we see the same process still going on; for here, as elsewhere, creation is ever continued. Not only are animal forms continually changing in domestication and new varieties thus created, but all the forms are still created as mysteriously as in the primitive world. In that hoof-hole in the road, where we saw the plants made so soon after the summer shower, we find animals created almost as quickly. In the small fraction of a drop from that little ocean you may often see them by the hundreds—single celled animals—very much like the protococcus plants, and come like them from the unseen as mysteriously as in the Cambrian seas. From such single and simpler cells all animal forms come. Watch the snails created every spring from minute specks that have grown from still minuter cells in the parent—a mollusc creation quite as marvellous as in the Silurian seas. So with the crustaceans. Watch the beautiful branchipus in some April pool. The little speck from which he has come, was, all last summer, lying dried and baked in the hot clay, or blowing in the dust; yet here, under the ice, it has grown into this fairy form, so brilliant with blue and red, its fins as branched as a fir-tree, serving as gills too, and waving in graceful rhythm as he swims on his back. Here, by the roadside, he has been created as wondrously as the old trilobite, of which he is a close relative. Or watch the creation of water vertebrates in any fish hatchery. And to see the swimming forms turned into land animals, watch the black specks in any spring ditch, as they slowly change into gilled tadpoles, and these again to lunged frogs, which take to the fields. Every frog condenses into a single season those many changes which we call miraculous creations when following slowly in the far off ages. And why should we doubt that creeping species slowly grew into flying ones, when every butterfly still springs more wondrously from a worm? Birds, too, still pass obscurely through a gilled form in the hatching egg, and every mammal in its pre-natal growth,—all still repeating dimly these creations of countless ages, and each coming from a single unseen cell. We need not deny the evolutionist's doctrine that all animal species have come from a few simple forms; for out of forms so simple and similar that they cannot be told apart, still come all the myriad animal creations from mollusc to man.

THE MORE REVERENT THOUGHT.

And how much diviner a creation this theory shows! Old pictures represent a visible God shaping a few fish, fowl and beasts, and then clumsily building up Adam from clay, and fashioning Eve from a rib. How much more reverent and religious a thought does science suggest, of a Creator still and forever speaking these old fiats, "Let the waters bring forth abundantly," and "Let the earth bring forth the living creature!" An unseen but infinite spirit of life, forming all species, and not forsaking, but forever filling them from generation to generation; with divine constancy holding each form to its type; with as divine change gently adapting each type to its surroundings with continued progress; so reaching man and ever raising man; and out of simple cells, infinitesmally finer than Eden's clay or Adam's rib, still creating, not merely two human beings one day, but 50,000 every day, and creating them not to fall and ruin the world, but to rise and ever redeem the world to higher use, beauty and blessing!

LESSON XI.

MAN'S "DOMINION" AND "DIVINE IMAGE."

We have thus traced creation upward to the wondrous human body. But we have yet to notice in man a more marvelous mental, moral and spiritual creation. The old "Genesis" story, exalting man, pronounces him made "in the image of God," to "have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth." But to-day we may see in man a far higher "dominion" and more God-like "image."

This human pair of "Genesis" were indeed little better than animals. Naked in body, as naked in mind, with no taste yet of "the tree of knowledge," so that the only thing we hear of them doing with this pleasant Eden is—to lose it. Unmoral, too, with no "knowledge of good and evil," mere creatures of appetite, eating and falling, the man meanly blaming the woman. Their religion only fear,—trying to hide "amongst the trees" from a weak God who "walked in the cool of the day," and who was outwitted by a serpent, and cursed his creation. Poor savages they remain to the last,—their highest products, so far as the story tells, "aprons of fig-leaves;' their first-born son a murderer; their race for long centuries given to violence, and so worthless and wicked that the Lord "repented that he had made man," and at length sent a flood to destroy them. So low a creation was this man of "Genesis."

The primitive man was, indeed, much like this:—probably rising in tropical Edens, along those fertile river valleys, among abundant trees "pleasant to the sight and good for food;" but a low savage, naked or clad in leaves as Schweinfurth saw them in Africa, thinking toil an evil and most ground cursed, of mere animal appetites, brutal and ignorant, morality unborn,—their religion only fear of gods as fickle as themselves. Long they remained in this low Eden, plucking spontaneous fruits, and with the mere hunter's "dominion" over fish, fowl and beast, which they but "named" and slew for food

But learning to eat from "the tree of knowledge," not once alone, but daily, and with ever increasing appetite, they lost indeed this lazy Eden of animal content, and went forth to toil and trouble, yet not to fall, but to rise to ever higher dominion and divine image. From the hunting stage they advanced to the pastoral, and learned not merely to kill, but to keep the animals for readier food and more varied service. Then through the long and slow progress of agriculture, they learned not merely to pluck but to plant fruits and seeds, to till the ground, and find under its fancied curse a blessing. Its grasses they slowly turned by till, age into richer grains; its "thorns and thistles" into trees and plants, with finer fruits and fairer flowers. Instead of losing Eden, they were learning to turn the wide world into an Eden. Even the waste waters were to be stocked with fish. Fowl and cattle were not only multiplied, but new varieties created, as among plants. Man was showing his "image" of the Creator, not merely by "dominion," but by becoming creator himself.

Still more did man show his divine image by learning to master and even to make for himself the other creations of the story. Below the "firmament" roof he created a more sheltering roof of his own; and within it he learned to turn the firmament into fire, and create warmth in winter and light in the night. This fire which he at first, perhaps, caught from the volcano or lightning, he learned to create at will from rubbed wood or struck stone; and at length this agent which we saw so slowly created by pressure on the planet, he learned to create in an instant by pressure on a bit of phosphorus. No wonder the savage thought our familiar match, by which man could carry the volcano and the lightning in his pocket, and make the fire flow and flash at will, "the greatest miracle since creation." Then man learned to make the wind fuel blow faster, and to create fiercer fire in forge and furnace; so he dissolved the rocks and melted the metals again, and rose from the Eden age of stone, through successive ages of bronze and iron and steel. In this growing dominion he learned to enslave the streams as he had the cattle, and to make the waters, as they were "gathered together unto one place," to work for him, grinding, sowing, weaving. So, instead of old Hebrew tents, came boarded and beautiful homes; instead of Biblical women wearily turning stones all day to mash a little meal for the family, came great flouring mills to feed foreign states; and instead of Eden's fig-leaves, came factories making fine cloths by the mile. Not only the waters, while "gathered together," but while scattered again, he made to work for him; and creating to order those wondrous "waters above the firmament," he sent them in his steam engines to drive machinery, to draw cars across the continent, and ships over the seas, to carry crops and comforts everywhere.

Ever eating faster and with keener appetite from "the tree of knowledge," he learned in his chemistry of the original elements of creation, and how to get back to them, and mix them in endless new creations with ever growing dominion. He learned new dominion over his own body; how to throw man any time into as deep a sleep as Adam's in the story, and to painlessly remove more important bones than ribs, and make about as good to take their place. He learned in his medicine to heal and save, to "put forth his hand and take also of the tree of life," and lengthen his years below.

Better yet, he learned to make each year longer and life larger with ever-growing knowledge and power. See, for instance, what he has done with that light of the story. Out of old sand heaps he created glass clearer than quartz, to flood his house with light. Out of the glass he made cunning lenses to increase the light. So with spectacles he saved and strengthened his eyes when they failed. Even created, as it were, new eyes;—telescopes to see a thousand times further, and microscopes to see ten thousand times finer, so bringing within his vision above and below infinite worlds of wonder. Out of the same glass he made a prism as a plaything, and then turned the plaything into a spectroscope, which showed substances far finer than the microscope could, and reaching beyond the telescope, brought down the stars to tell him what they were made of. So he has gone on, enslaving this light to all sorts of service, from bleaching his linen to painting his pictures. And not only the light of the sun, but the more mysterious light of the storm. Upon this lightning in which savage and psalmist saw an angry God, man has laid his hand, and, learning to manage and to make it, sets it up as a steady lamp to supplement the sun, and sends it as a new savior to strengthen the nerves of men, and carry their messages under the ocean and around the world,—no longer a demon to slay, but an angel to save and serve.

These are a few examples of man's "dominion,"—vastly higher above Adam's than was Adam's above the apes'. And ever this "dominion" grows; here, too, the creation is unceasing. Most of this dominion has been won in the last century, and every year its attainments become more marvelous, Thus man seems a being infinite in mental vision and power; and the farther he reaches the faster he rises. As lord and creator, he advances with geometrical progress, and reveals every year a clearer "image of God." And man to-day, summing up so briefly this long progress, advancing in so few years from an invisible speck of matter to this mental dominion over earth, space and time, shows an ever-repeated miracle of creation before which all those of old story are as nothing.